SONY

3-754-912-21(1) T98

Stereo Component System

Operating Instructions

SEN-421CD

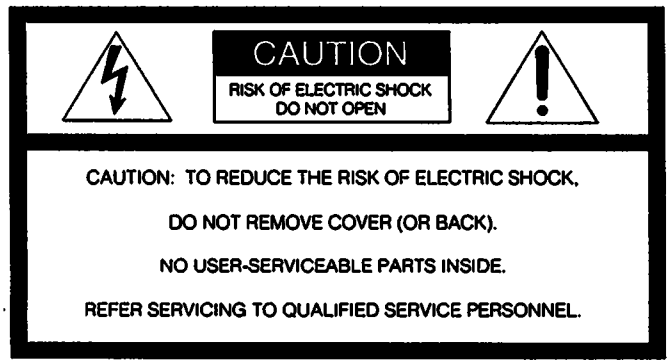
Owner's Record

The model and serial numbers are located at the rear. Record these numbers in the spaces provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

TA-AV421 Serial No._____
ST-JX421 Serial No._____
TC-W421 Serial No._____
CDP-C221 Serial No._____

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

* The graphical symbols are on the rear enclosure.

Note to CATV system installer
This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Information

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient the receiving antenna
Relocate the equipment with respect to the receiver
Move the equipment away from the receiver
Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:
"How to Identify and Resolve Radio-TV Interference Problems".
This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock No. 004-000-00345-4.

For the customers in Canada

CAUTION
TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

THIS APPARATUS COMPLIES WITH THE CLASS B LIMITS FOR RADIO NOISE EMISSIONS SET OUT IN RADIO INTERFERENCE REGULATIONS.

CAUTION

The use of optical instruments with this product will increase eye hazard.

Precautions

On safety
- Operate the unit only on 120 V AC, 60 Hz.
- Should any solid object or liquid fall into the unit, unplug it and have it checked by qualified personnel before operating it any further.
- Unplug the unit from the wall outlet if it is not to be used for an extended period of time. To disconnect the cord, pull it out by grasping the plug. Never pull the cord itself.
- As the laser beam used in this compact disc player is harmful to the eyes, do not attempt to disassemble the cabinet. Refer servicing to qualified personnel only.

On installation
- Place the unit on a level surface.
- Do not install the unit in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- Good air circulation is essential to prevent internal heat buildup in the unit. Place the unit in a location with adequate air circulation. Do not place the unit on a soft surface, such as a rug that would block the ventilation holes on the bottom.
- Do not place anything on top of the cabinet. The top ventilation holes must be unobstructed for the proper operation of the unit and to prolong the life of its component.

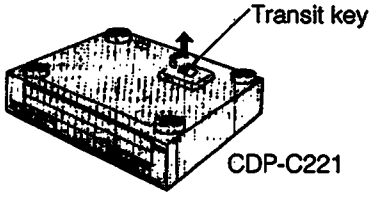
On cleaning the cabinet
Clean the cabinet, panel and controls with a soft cloth lightly moistened with mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

On repacking
Do not throw away the carton and the packing material. It makes an ideal container to transport the unit in.

On moisture condensation
If the unit is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lens inside the unit. Should this occur, the player will not operate. In this case, remove the disc and leave the player turned on for about an hour until the moisture evaporates.

If you have any question or problem concerning your unit, please consult your nearest Sony dealer.
For detailed precautions, see the leaflet "IMPORTANT SAFEGUARD". (Model for USA)

Note on the Transit Key
The transit key on the bottom exterior of the CDP-C221 protects the optical system against shock during transportation. Before operating the CD player, be sure to remove the key by following the instructions on the label, and store it in a safe place.
When transporting the unit, replace the key in its original hole and lock it in place.



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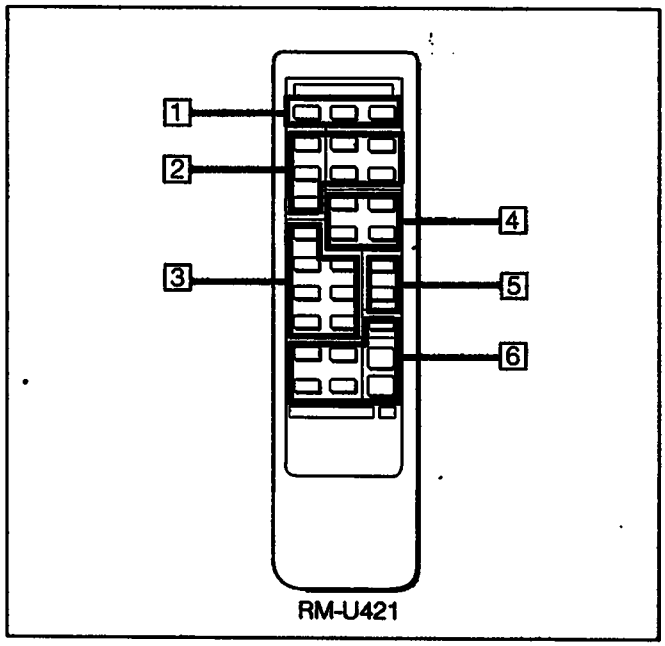
Remote Commander

The remote commander supplied with this unit can control the unit from a distance.
The remote commander is divided into 6 sections according to the functions as shown below.



RM-U421

1 Power control block

VCR 3/TV/AUDIO POWER buttons: Control the power of each unit.

2 TV/VTR control block

VCR 3 operation buttons:
►: Play
■: Stop
ANT (antenna) TV/VTR button: Selects the output signal from the antenna terminal on the VCR, either a TV signal or VCR programs.
TV VOL (volume) +/– buttons: Control the volume of TV.
TV CH (channel) +/– buttons: Select the channel of the TV.

3 CD control block

SHUFFLE button: Set to the shuffle play mode.
►: Play
In the TUNER mode:
Press CD ► once, the unit enters the CD mode.
Press CD ► twice, the CD player starts playback.
In the mode other than the TUNER mode:
Press CD ► once, the unit enters the CD mode and starts playback.
■: Stop
I◄◄/►►I (AMS: Automatic Music Search): Locates a desired selection.
D (disc) SKIP button: Disc skip
CONTINUE button: Set to the continuous play mode.

4 SURROUND control block

SURROUND mode selectors (for the amplifier)
ON/OFF: Turns on/off the surround mode.
MODE: Selects the surround mode.
REAR VOL +/– buttons: Control the volume of rear speakers (surround level).

5 Tuner control block

TUNER PRESET +/– buttons: Select a preset station of the tuner.

6 Amplifier control block

FUNCTION selectors: Select an input source of the amplifier.(for the amplifier)
DBFB button: Turns on/off the DBFB (Dynamic Bass Feed Back). (for the amplifier)
MASTER VOL +/– buttons: Control the amplifier volume.

Battery life

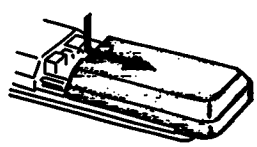
About half a year of normal operation can be expected when using the Sony SUM-3 (NS) batteries. When the batteries are exhausted, the remote commander can no longer operate the unit. If this happens, replace both batteries with new ones.

To avoid battery leakage

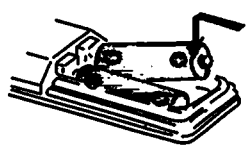
When the commander is not be used for a long time, remove the batteries to avoid damage caused by battery leakage and corrosion.

Inserting the batteries into the remote commander

1 Open the cover.



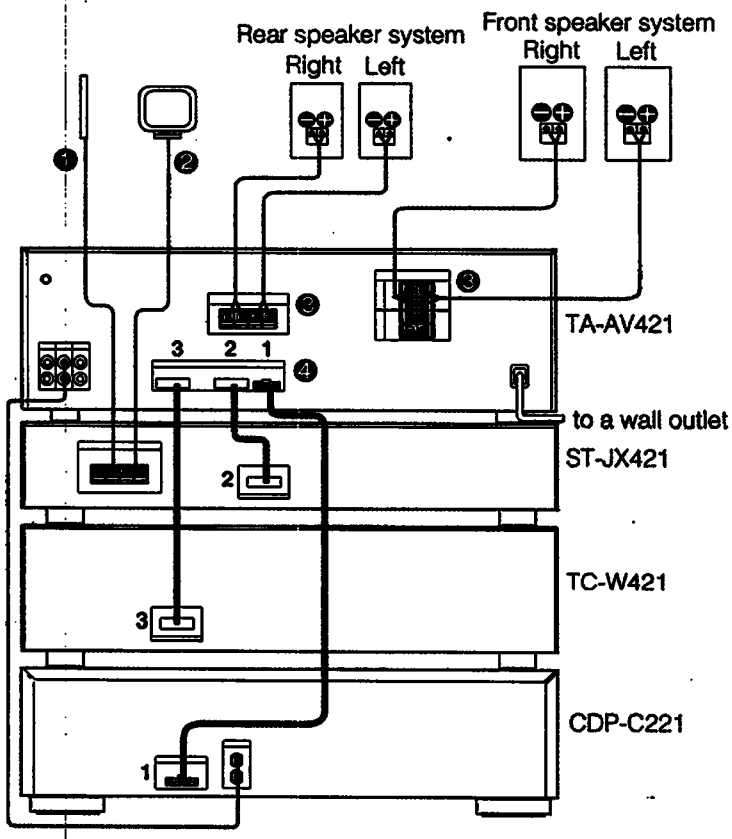
2 Insert two size-AA (R6) batteries with correct polarity



Hooking Up the System

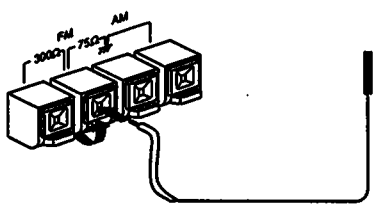
- Connect the AC power cord last. Make sure power is off.
- Cord plugs and jacks are color coded. Red plugs and jacks are for right channel (R) and white ones for the left channel (L).
- The cable connectors should be fully inserted into the jacks. A loose connection may cause hum and noise.
- Keep speaker cords, connecting cords and power cords away from the AM loop antenna and the tuner's antenna lead-in to avoid possible noise pickup.

The numbers correspond to the following details.

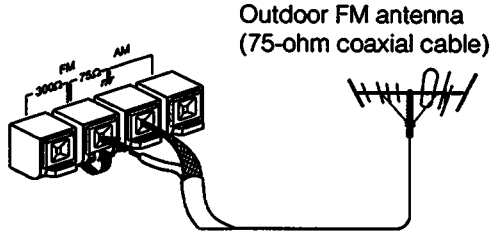


Note
The CD player is automatically turned off in the TUNER mode.

❶ FM wire antenna (supplied)



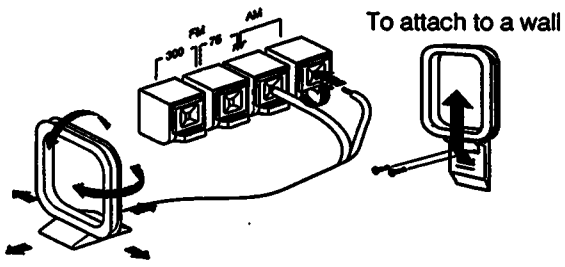
For better FM reception



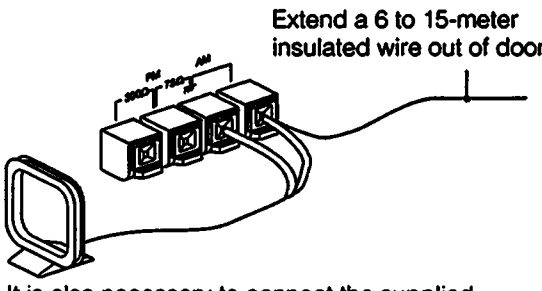
Hooking Up the System

CAUTION
Do not put anything like another unit to obstruct the ventilation holes on the top of the unit.
The level surface installation is required for essential air ventilation to prevent internal heat built up in the unit.

❷ AM loop antenna (supplied)



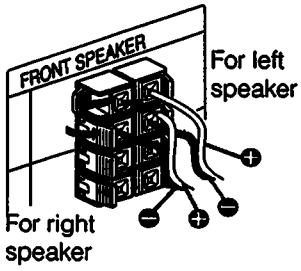
For better AM reception



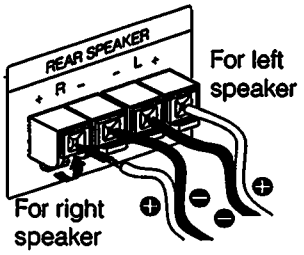
It is also necessary to connect the supplied AM loop antenna.

❸ Speaker cords

Front speakers

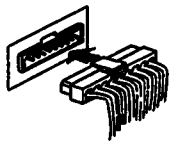


Rear speakers

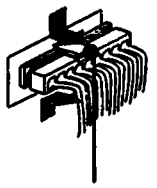


❹ SYSTEM CONTROL cord (Supplied)

For the SYSTEM CONTROL 1



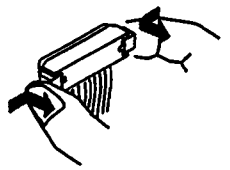
Push in until it clicks.



To disconnect, pull out while pressing here.

For the SYSTEM CONTROL 2 and 3
Connect the blue and black connectors to the same color connector jacks respectively for controlling each unit.

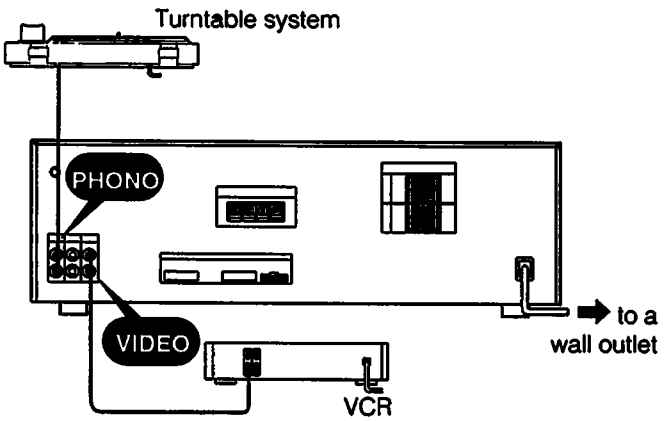
Push in until it clicks.



To disconnect, pull out while pressing the both sides of levers.

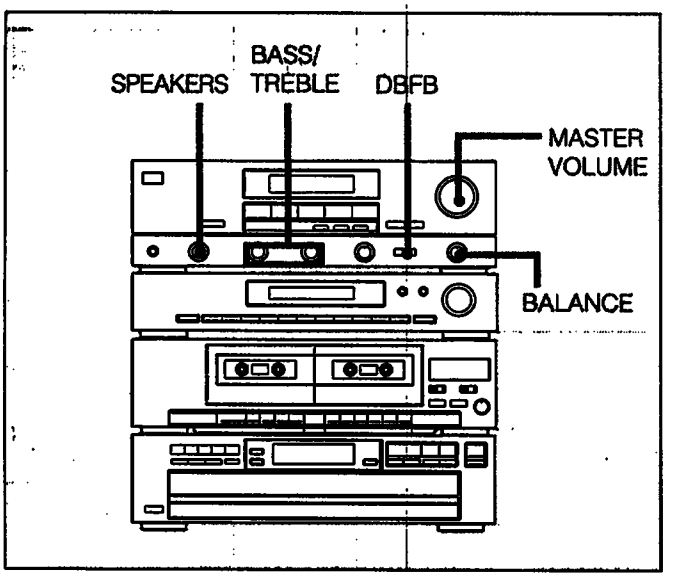
Note for the USA model
The SYSTEM CONTROL 2 and 3 is equipped on the TC-W421.

Adding other audio equipments to your system



Audio Adjustment

You can enjoy superb sounds using the audio adjustment functions as shown below.



Adjusting Volume

To increase the sound level, turn the MASTER VOLUME clockwise.
To decrease it, turn the control counterclockwise.

Adjusting Balance

To change relative strength of the right and left speaker outputs, adjust the BALANCE control.

Reinforcing the Bass Sound

To powerful bass sound, press the DBFB (Dynamic Bass Feed Back) button. The lower the volume, the more the bass sound is emphasized.

Adjusting Tone from the Front Speakers

To enhance treble and bass sound from the front speakers, turn the TREBLE or BASS control clockwise.
To attenuate them, turn the TREBLE and BASS control counterclockwise.

Selecting the Speaker System

To drive speaker system A: Set SPEAKERS to A.
To drive speaker system B: Set SPEAKERS to B.
To drive both speaker systems A and B (series connection): Set SPEAKERS to A + B.
For headphone listening: Connect headphones to HEADPHONES and set SPEAKERS to OFF.
To turn off the rear speaker, set SURROUND to off.

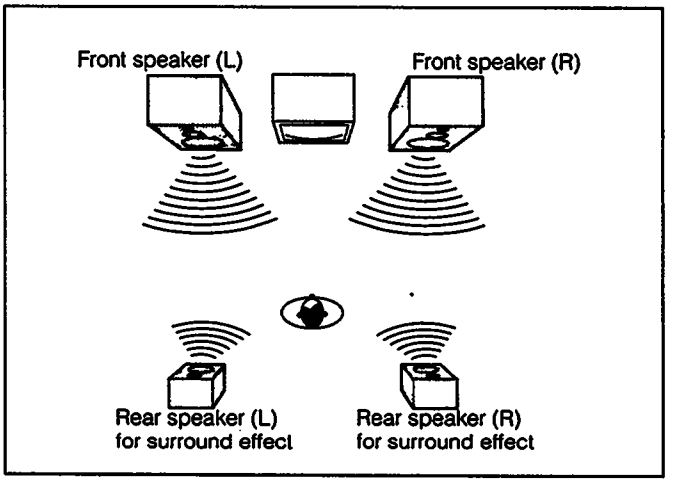
IMPORTANT
Speaker systems A and B are series connected. When only one speaker system is connected, no sound can be heard at the A + B position.

Surround Sound

This section describes about the basic surround system and then adjusting the sound level of the rear speakers and input balance so that you can enjoy the Dolby surround sound.

Basic Surround System

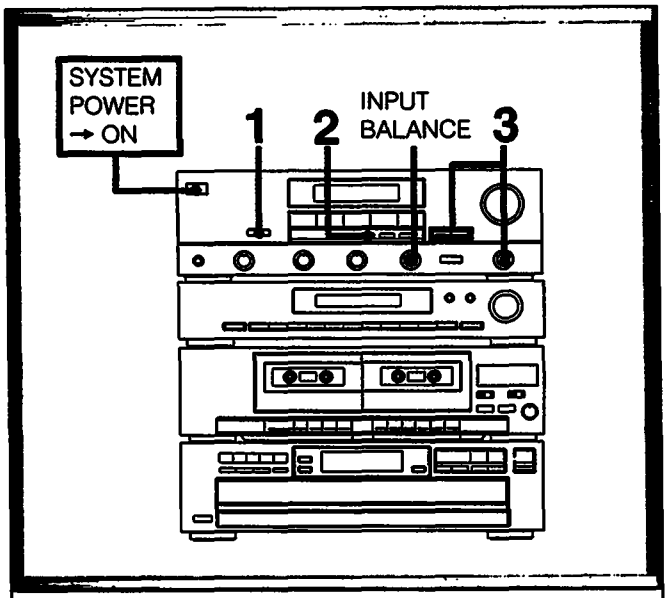
Two front and two rear speakers are necessary to enjoy the surround function.
Where you place the speakers depends on the size and acoustics of the listening room.
The figure below are just examples.
We recommend that you experiment to find the speaker direction or location in which the most effective acoustics can be obtained.



Getting Ready to Enjoy Surround Sound

Adjusting the Surround Level and Input Balance for Dolby Surround System

When playing back a program source processed with Dolby surround system, the output level and input balance must be adjusted to obtain the best surround effect.



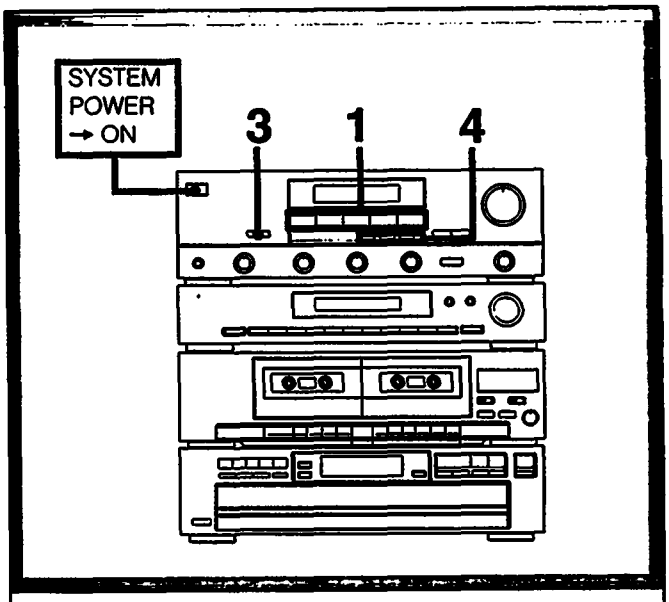
1 Press the SURROUND button on the front panel or the SURROUND ON/OFF button on the remote commander to set to the SURROUND mode.

2 Select the DOLBY mode with the DOLBY button on the front panel or the SURROUND MODE button on the remote commander.

3 Adjust the sound level of front and rear speakers. Turn the BALANCE control to adjust the front speakers. Press and hold the REAR LEVEL +/– buttons to adjust the rear speakers output level.

To adjust the input balance
In the DOLBY mode, adjust the INPUT BALANCE control until the monaural sound, such as a dialogue, heard from the rear speakers is minimized.

Listening with the Surround Effect



1 Select the program source.

2 Start playback of the selected program.

3 Press the SURROUND button to set to on.

4 Select the surround mode with the SURROUND MODE* buttons.

*** You can select the surround modes with the SURROUND MODE buttons.**
DOLBY** (Dolby Surround): Expands sound just like listening to it in a movie theater.
HALL (Hall surround): Provides reverberation effect that is produced in a concert hall.
SIMULATED (Simulated surround): Gives a simulated stereo effect to monaural sound.

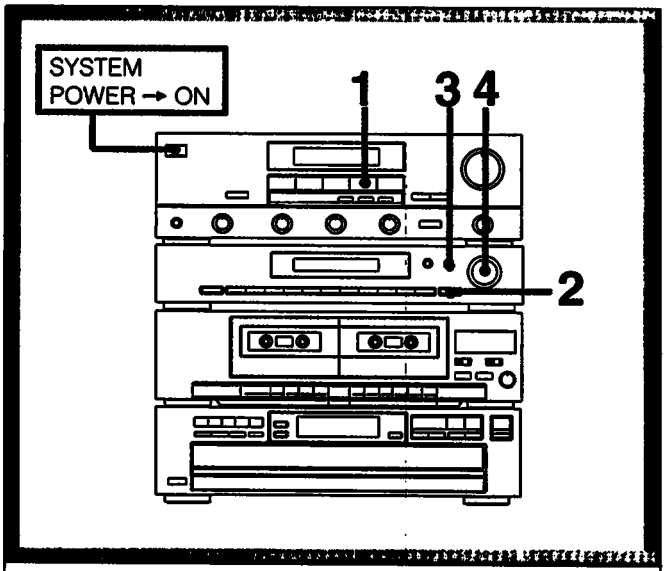
** Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under one or more of the following patents: U.S. numbers 3,632,886, 3,746,792, and 3,959,590. Canadian numbers 1,004,603 and 1,037,877. "DOLBY" and the double-D symbol DD are trademarks of Dolby Laboratories Licensing Corporation.

Note
No sound will be heard from the rear speakers, unless the SURROUND button is set to on.

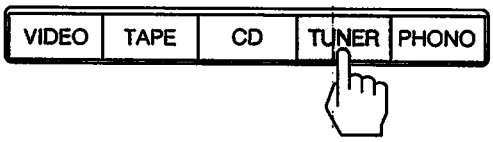
Receiving Broadcasts

This section describes about the various ways of tuning which are very convenient.
Before reception, be sure to connect the supplied AM and FM antenna.

Tuning in Automatically

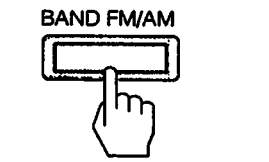


1 Press TUNER.

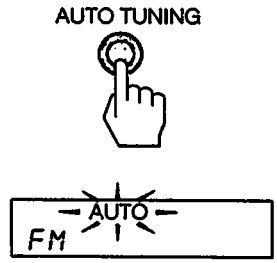


The CD player is automatically turned off in the TUNER mode.

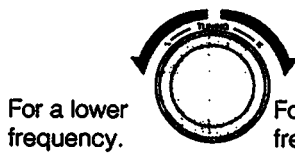
2 Press BAND FM/AM to select FM or AM.



3 Press AUTO TUNING to set to the AUTO TUNING mode.



4 Select the station.



When a station is received automatic tuning stops.

Indicators in the display window

- "TUNED" appears when a stations tuned in.
- "STEREO" appears when an FM stereo program of sufficient signal strength is received.

To change the AM tuning interval

The AM tuning interval is preset at the factory to 10 kHz to match the frequency allocation system of your country. To change the interval to 9 kHz, proceed as follows.

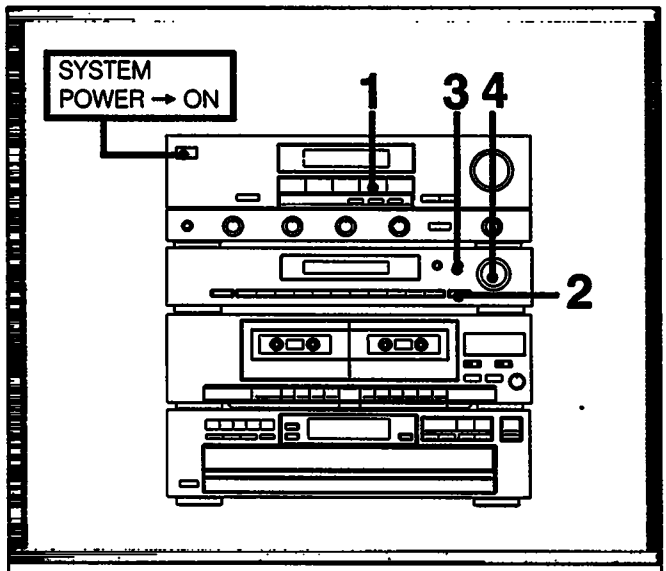
1 Press SYSTEM POWER to turn on the unit.
2 Set the BAND selector to AM.
3 Press SYSTEM POWER to turn off the unit.
4 While pressing TUNING +, press SYSTEM POWER again to turn on the unit.
To reset the interval to 10 kHz, follow the same procedure.

Note

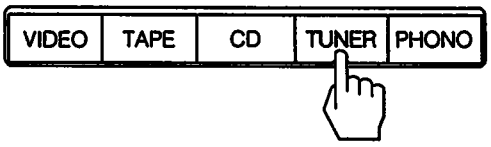
When the interval is changed, all stored stations will be erased from the memory. After changing the interval, be sure to store the stations again.

Receiving Broadcasts

Tuning in Manually

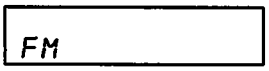


1 Press TUNER.



The CD player is automatically turned off in the TUNER mode.

2 Press BAND FM/AM to select FM or AM.



3 Press AUTO TUNING to release the AUTO TUNING mode.

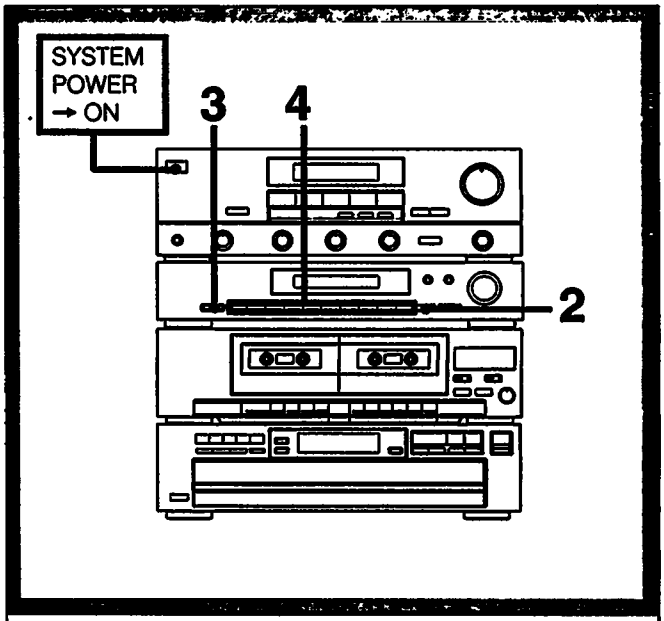
"AUTO" goes off on the display.

4 Select the station.

For a lower frequency. For a higher frequency.

Up to 10 stations can be stored in any order for each memory page (A, B, C). Therefore, 30 stations can be stored in total.

Storing Station Frequencies into Memory

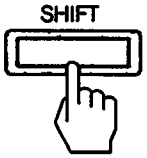


1 Tune in a desired station. (See page 9 to 10.)

2 Press MEMORY.

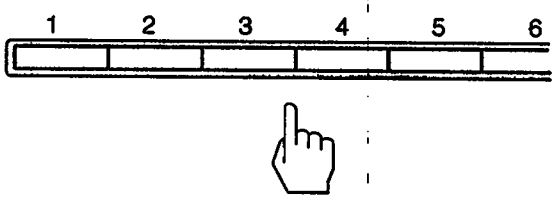
3 While "MEMORY" appears on the display, press SHIFT to select the memory page (A, B or C).

A - 1, A - 2, ...A - 0
B - 1, ...B - 0
C - 1, ...C - 9, C - 0



Each time SHIFT is pressed, A, B or C is indicated cyclically.

4 While "MEMORY" appears, select the desired number with the numeric buttons.



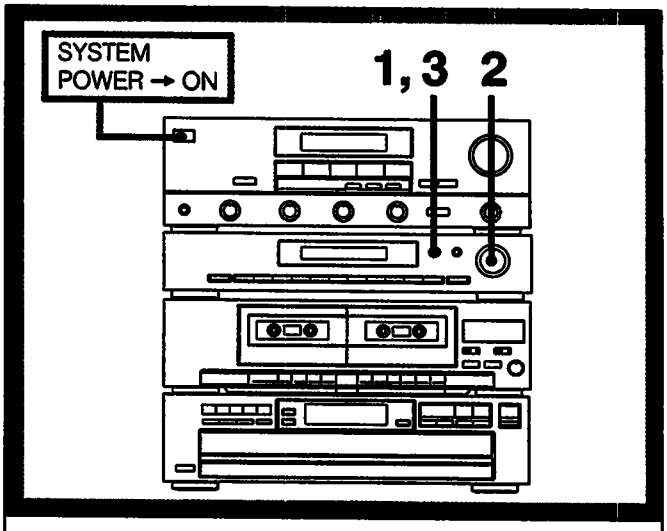
If you cannot store a station successfully
You can store a station only while "MEMORY" appears on the display.
If "MEMORY" has gone off, press MEMORY again.

How long does a station remain stored?
Storing a new station on a used code erases the previously stored one.

Tuning into a Stored Station Directly

1 Press TUNER.
The CD player is automatically turned off in the TUNER mode.
2 Press SHIFT.
3 Designate the number with the numeric buttons.

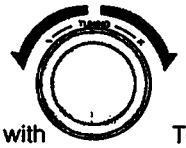
Scanning Stored Stations – Memory Scanning



1 Press MEMORY SCAN.

The code indicator flashes in the window.

2 Turn the TUNING knob.



To scan stations with preceding codes.

To scan stations with succeeding codes.

3 Press MEMORY SCAN as soon as the desired station is received.

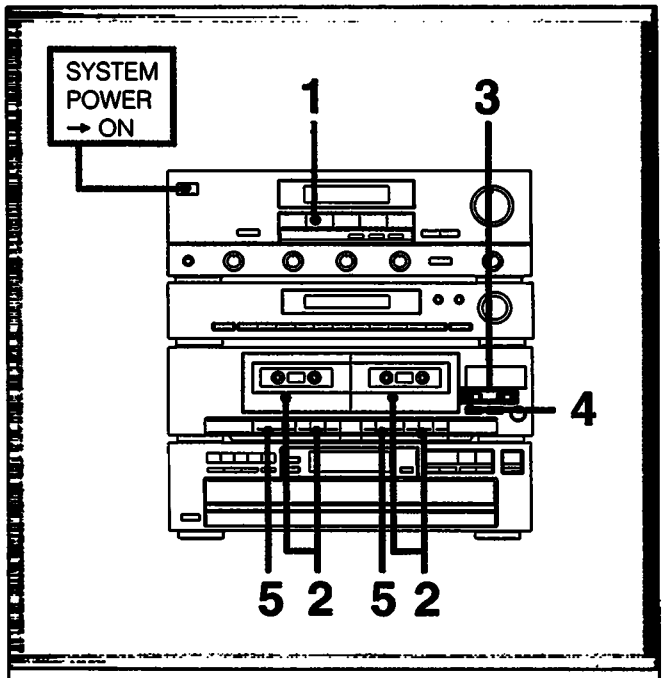
The scanning stops.

When the memory scan skips the stations during memory scanning
The memory scan will skip stations which have a very weak signal.

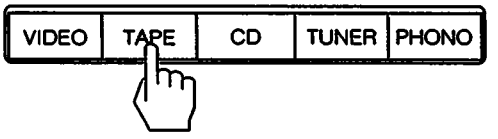
If you cannot scan successfully
Turn the TUNING knob while the code indicator is flashing.
If the flashing has stopped, press MEMORY SCAN again.

Playing Back Tapes (on either Deck A or B)

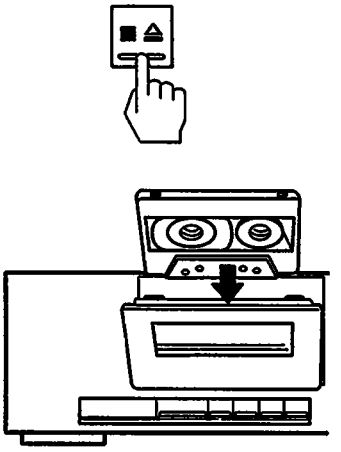
This section describes about a basic playback operation on the either deck A or B.



1 Press TAPE.

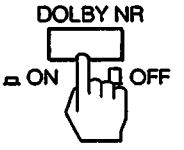


2 Open the cassette compartment and insert the tape with the side to be played back facing you.

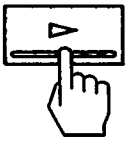


3 Select the tape type.

4 Press DOLBY NR to select the DOLBY NR setting.



5 Press ▷ to start playback.



When the tape ends, playback automatically stops.

To stop playback, press ■ ⏏.

To pause, press ⏸.

To resume playback, press ⏸ again.

Notes

- When both Decks A and B are in playback mode, only playback from Deck A will be audible.
- During playback or recording mode on a Deck, do not operate the other Deck.
- Before turning the power off, be sure to release ▷ or ● by pressing ■ ⏏. Otherwise, the tape may become entangled when the power is turned on again.
- When playing back the tape of the type IV, set TAPE SELECTOR DECK B to the II position.

What is the Dolby NR* system?

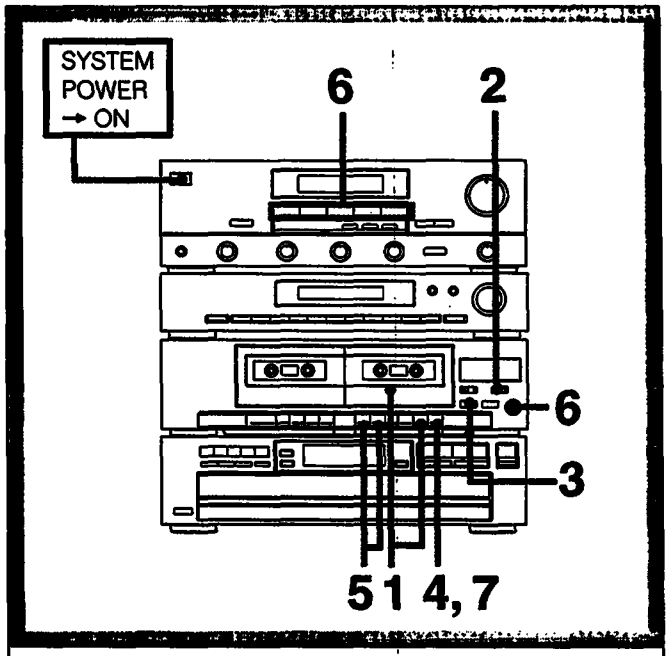
Dolby NR (noise reduction) system reduces tape hiss noise in low-level, high-frequency signals. The system boosts these signals in recording and lowers them in playback. When listening to a tape recorded with Dolby NR, set the DOLBY NR switch to ON.

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.

Recording on Tapes (Deck B)

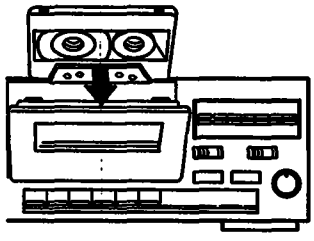
T91

This section describes about the recording operation only on deck B.



1 Open the cassette compartment and insert the tape with the side to be recorded facing you.

DECK B

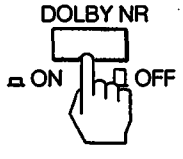


2 Select the tape type.

TAPE SELECTOR (TYPE)

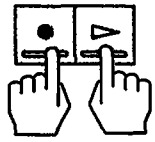
DECK B

3 Press DOLBY NR to select the DOLBY NR setting.



4 Press ▮▮.

5 Press ● and ▷ together to set the unit in recording pause mode.



6 Play the desired program source to be recorded and adjust the recording level.

7 press ▮▮ to start recording.

To stop recording, press ■ ⏏.

Notes

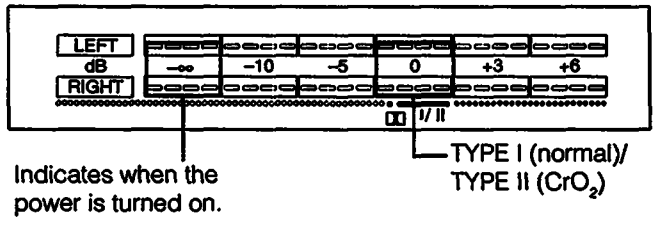
- In the recording mode on deck B, do not operate deck A.
- For recording, the tape type IV is not recommended.

To adjust the recording level

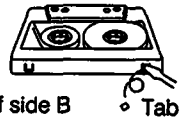
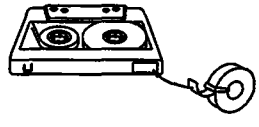
Adjust the recording level according to the tape type observing the PEAK LEVEL METERs.

Recommended maximum peak level meter reading

PEAK LEVEL METER

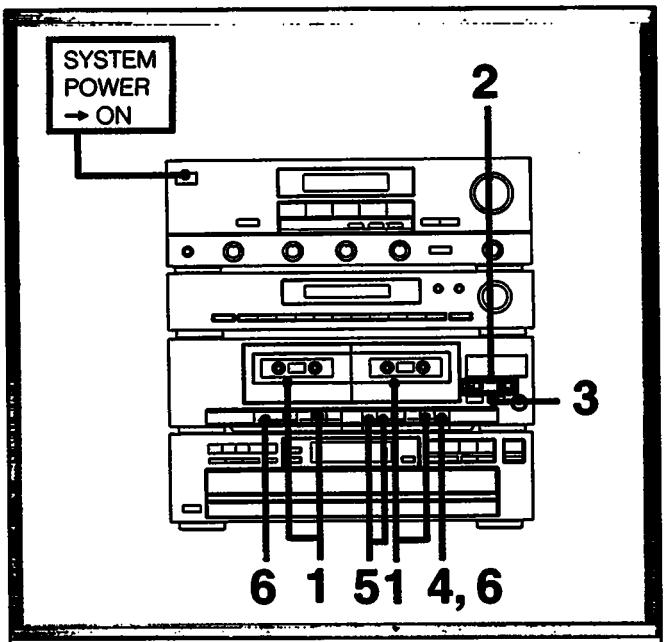


To prevent accidental erasure

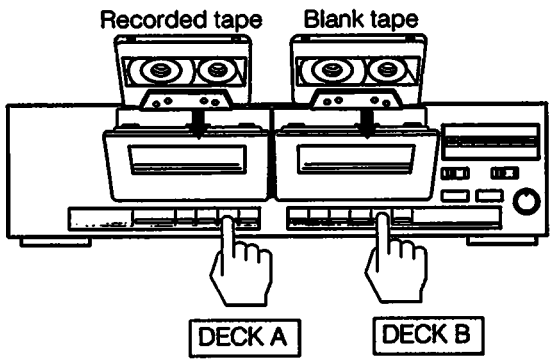
To protect side A recording	To reuse a cassette
Break out the tab of side A. Side A  Tab of side B ◦ Tab of side A	Cover each slot with plastic tape. 

Dubbing Tapes (from Deck A to B)

This section describes about the operation of the recording from deck A to B.

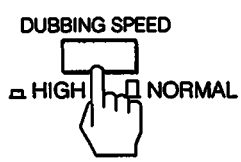


1 Press ■ ⏏ to open the cassette compartment and insert the tapes with the sides to be played back or recorded facing you.

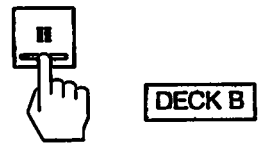


2 Select the tape type.

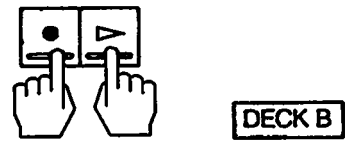
3 Press DUBBING SPEEED to select the dubbing speed.



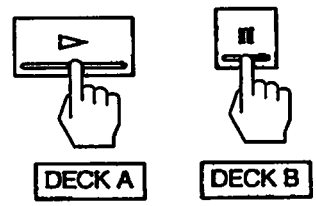
4 Press ⏸.



5 Press ● and ▷ together to set the unit in recording pause mode.



6 Press ▷ on deck A and ⏸ on deck B together.



To stop dubbing, press ■ ⏏ on both decks.

Notes

- The tape in Deck B is automatically recorded with the same recording system as the original tape in Deck A. So it is unnecessary to select DOLBY NR.
- Do not change the setting of the DUBBING SPEED switch during tape dubbing.
- If the sound is affected by a television set during high-speed dubbing, turn off the set or move it away from the unit.

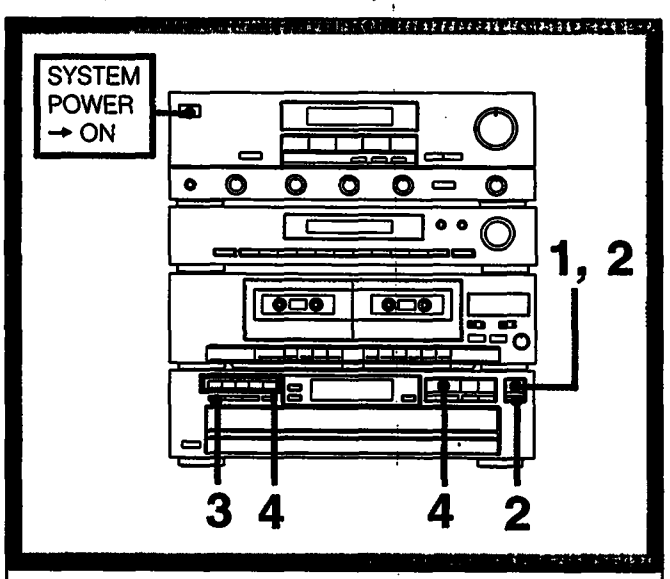
How to edit the tape

1 During normal-speed dubbing, press ⏸ on Deck B.
2 Locate the desired portion to be dubbed with ▶▶ or ◀◀ on Deck A. Then press ■ ⏏. Or replace the cassette with a new one.
3 Press ▷ on Deck A and release ⏸ on Deck B to start dubbing again.

Playing the Discs – Continuous Play

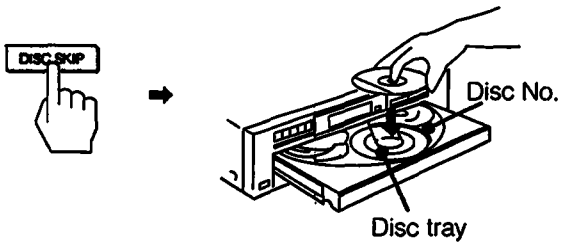
This section describes about the continuous play. This CD player can be played up to 5 discs, and you can choose to play all selection of a disc or all discs.

Before playing a disc, turn on the SYSTEM POWER and set the function selector to the CD mode.
(The CD player can be used in any mode other than the TUNER mode.)

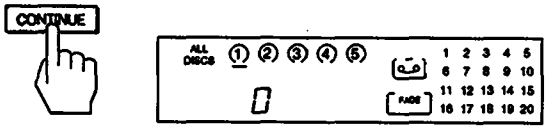


1 Press ⏏ to open the disc tray.

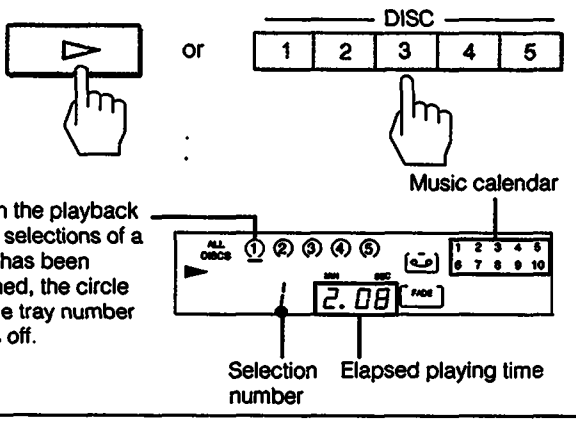
2 Place a disc with the label side up. To play more than one disc, press DISC SKIP to turn the disc tray and place up to 5 discs.
After placing discs, press ⏏ to close the disc tray.



3 Press CONTINUE to choose whether to play one disc or all discs. Each time CONTINUE is pressed, "1 DISC" or "ALL DISCS" changed alternately.



4 Press ▷ or the DISC button to start playback.


or
DISC
1 2 3 4 5
Music calendar
When the playback of all selections of a disc has been finished, the circle on the tray number goes off.
Selection number
Elapsed playing time

To stop play, press ■.

To stop play and open the tray, press ⏏.

To stop for a moment during play, press ⏸.
Press ▷ or ⏸ to resume playback.

When recording on the tape
Press ⏸ during the stop mode. The CD player enters the pause mode at the beginning of the first selection. This function makes recording on the tape easy.
Press ▷ or ⏸ to start playback. You cannot use this function in program mode.

Caution on adjusting volume
Do not turn up the volume while listening to a portion with very low level inputs or no audio signals. Otherwise, the speakers may be damaged when a peak level portion is played.

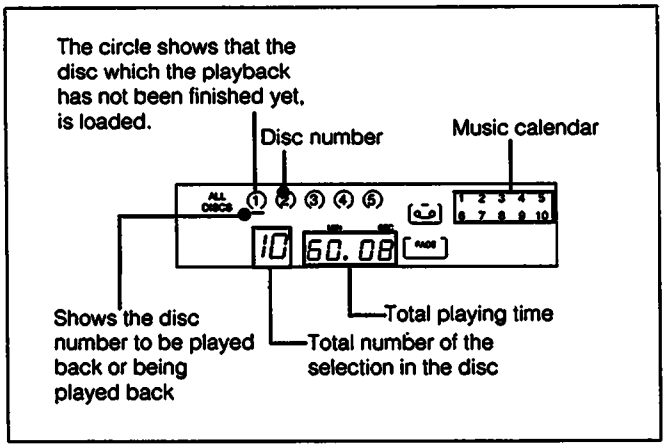
Note
The tray number of an empty tray will be displayed until the empty tray number is set to play. Once it is recognized as empty, it will disappear.

To play an 8 cm (3-inch) CD
Place it on the inner circle of the tray. If the disc is provided with an adaptor, first remove it. Do not put a normal CD (12 cm/5-inch) on top of an 8 cm CD.

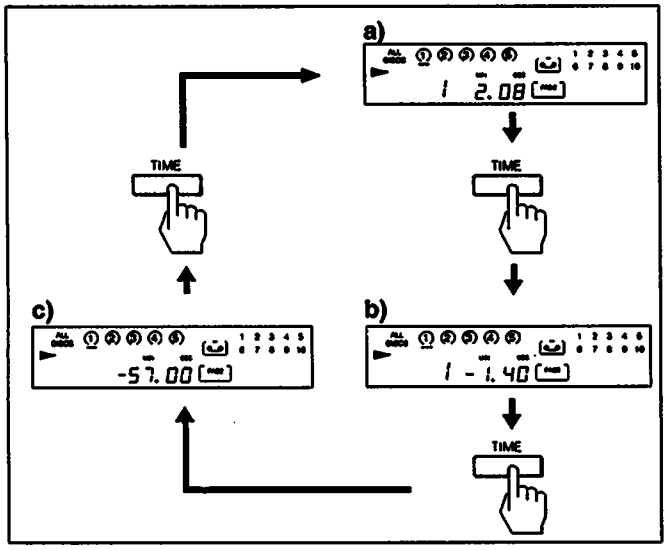
When there are no disc at all on the tray
"no dISC" appears on the display.

Playing the Discs – Continuous Play

Information Display


The circle shows that the disc which the playback has not been finished yet, is loaded.
Disc number
Music calendar
Shows the disc number to be played back or being played back
Total playing time
Total number of the selection in the disc

When the disc tray is closed by pressing ⏏, the total number of selections and the total playing time of the disc to be played are displayed for a few seconds.
If you press TIME during stop, the total number of selections and the total playing time of the disc to be played can be displayed.



Each time you press TIME during playback, the display changes as follows:

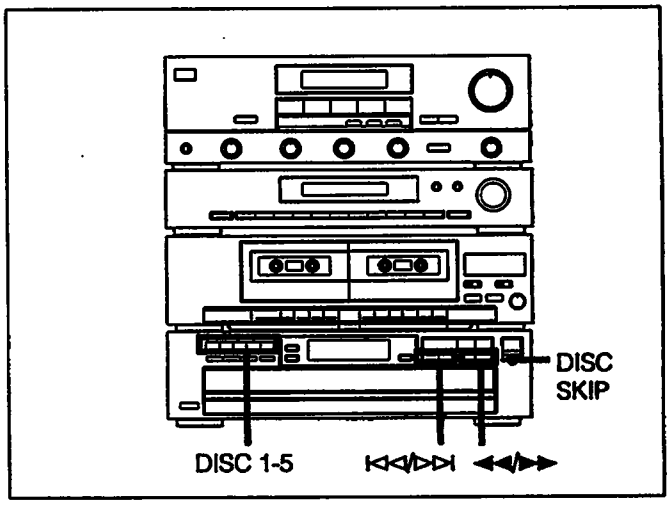
a) Elapsed time in a selection (automatically displayed when playback starts.)

b) Remaining time in the selection
"--.--" indicator will appear in the display window instead of the actual time, if a selection whose selection number is more than 21 is selected.

c) Remaining time of the disc

Notes

- Total remaining time is only available during the continuous mode. It will not be displayed by pressing the TIME button during the program or shuffle mode.
- Total remaining time will be displayed, if time fade is set in the program or shuffle mode.



Selecting a Desired Disc

By using the DISC 1 to 5 buttons or the DISC SKIP button during playback, you can locate the beginning of any disc.

To select a particular disc
Press the corresponding DISC 1 to 5 buttons.

To move to the disc tray next to the current one
Press DISC SKIP.

Locating a Particular Selection

Locating a selection in sequence (Automatic Music Sensor)
You can locate the beginning of a selection on the disc being played.

To locate the previous selection
Press I◁◁ until the desired selection is located.

To locate the succeeding selection
Press ▷▷I until the desired selection is located.

To locate the beginning of the selection being played
Press I◁◁ once.

To locate the beginning of the next selection
Press ▷▷I once.

Locating a Particular Point in a Selection

Locating a point in sequence (Manual Search)
You can locate a particular point during playback by monitoring the sound at high speed.

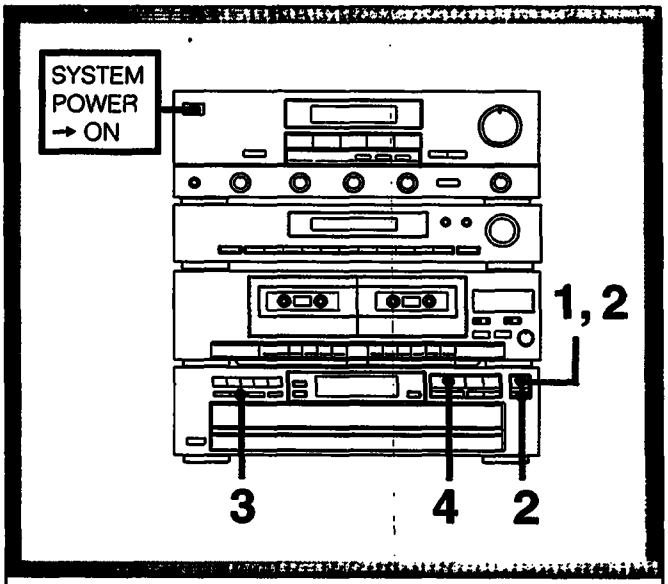
To go back at high speed
Keep ◀◀ pressed until you reach the desired point.

To go ahead at high speed
Keep ▶▶ pressed until you reach the desired point.

To locate at higher speed
Press ◀◀ or ▶▶ in the pause mode. Search speed will increase three times, but there will be no sound. Find the desired point by watching the number on the display.

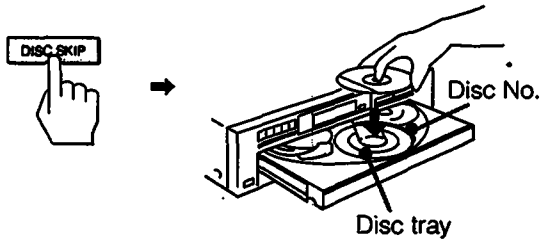
Playing in a Random Order – Shuffle Play

You can have the selections (up to 99) played in a random order. The unit will play all the discs or just one disc you desire.

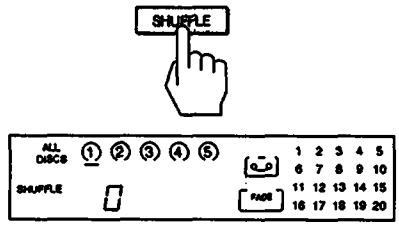


1 Press ⏏ to open the disc tray.

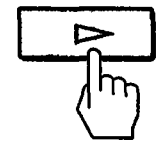
2 Place a disc with the label side up. To play more than one disc, press DISC SKIP to turn the disc tray and place up to 5 discs.
After placing discs, press ⏏ to close the disc tray.



3 Press SHUFFLE to set to the ALL DISCS mode.



4 Press ▷ to start playback.



Once a selection is played, it will not be played again until the random order is completed.

To stop playback
Press ■.

To cancel shuffle play
Press CONTINUE and return to the continuous play mode.

To change from program or continuous play to shuffle play
Press SHUFFLE during program or continuous play. The program mode will be cleared and shuffle play will start from the current selection being played.

While the player is shuffling the selection
[ ] appears on the display.

To Play only the Desired Disc in a Random Order

1 Press SHUFFLE to set to the 1 DISC mode.
2 Select the desired disc number with the DISC 1 to 5 buttons.
The unit starts playback automatically.

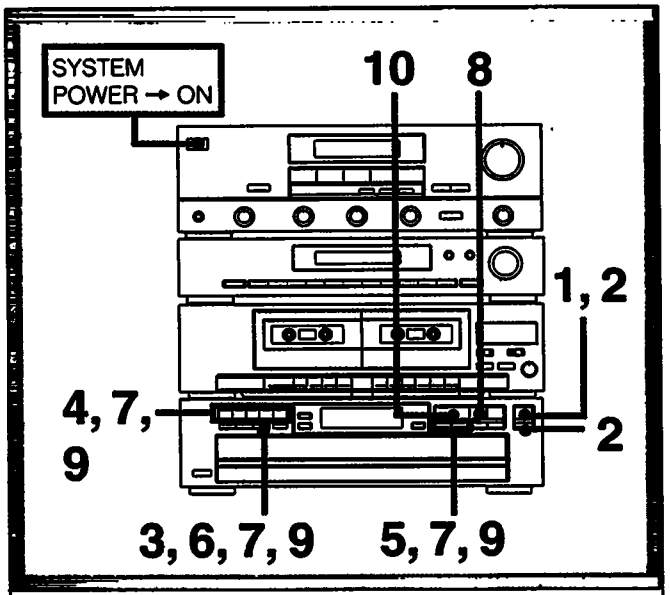
To cancel a disc which you have selected
Press DISC 1-5 buttons to be canceled. A circle will disappear around the selected disc number.

To put back all discs which you have canceled
Press ■ in the stop mode.

Note
During shuffle play in ALL DISCS mode, the DISC 1-5, MUSIC SCAN, EDIT/TIME FADE and PEAK SEARCH buttons do not function.

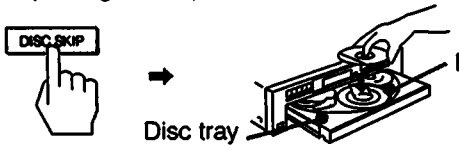
Playing in a Desired Order – Program Play

You can make a program by designating up to 32 steps in the order you want them to be played. The unit will play the disc according to your program. This function is very convenient for recording on the cassette tape.



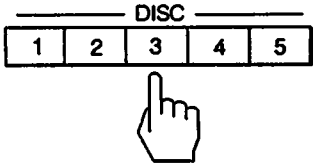
1 Press ⏏ to open the disc tray.

2 Place a disc with the label side up. To play more than one disc, press DISC SKIP to turn the disc tray and place up to 5 discs.
After placing discs, press ⏏ to close the disc tray.



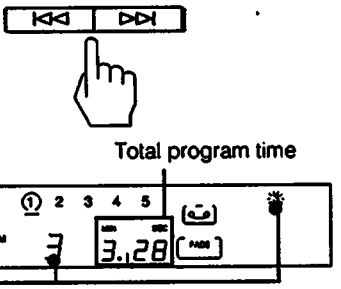
3 Press PROGRAM so that "PROGRAM" appears on the display.

4 Choose the disc.

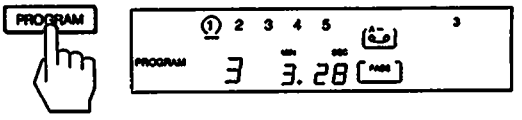


If you program a whole disc, see "To program a whole disc" on page 19.

5 Press ⏮ or ⏭ repeatedly until the desired selection is located.



6 Press PROGRAM after the desired selection has been chosen.

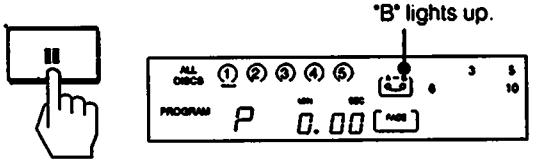


The selection is stored, and the blinking number in the window light up.

7 To program additional selections from the same disc, repeat steps 5 and 6.
To program additional selections from another disc, repeat steps 4, 5 and 6.

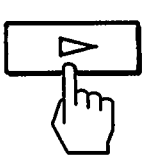
- You can make a program for recording on the both sides of the tape at one time by performing step 1 to 7.

8 If you program the selections for side B, press ⏸ to insert a pause.



9 Program the selections for side B.
Repeat steps 4 to 7 (or 5 to 7).

10 Press ▷ to start playback.

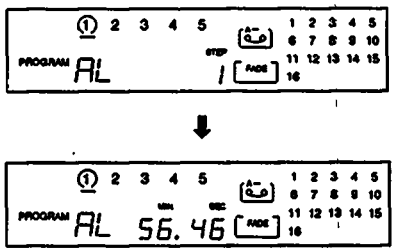


The selections for side A will start playback.

Note
The programmed selections are automatically canceled when the unit enters tuner mode.

To program a whole disc

- Using DISC 1 to 5
  After steps 1, 2 and 3:
  1 Press DISC 1 to 5 to select the disc.
  "AL" is displayed on the display.



  2 Go on to step 7.

- Using DISC SKIP
  After steps 1, 2 and 3:
  1 Press DISC SKIP. "AL" is displayed on the display.
  2 Press PROGRAM.
  3 Go on to step 7.

The whole disc is programmed as one step.

To program while observing the disc labels
You can program the selections with the disc tray open.

To play the selections for side B
When the selections for side A have been played, the unit will pause. ("B" lights up.)
Set the tape to the beginning of side B, then press ▷ or ▮▮.
The selections for side B will start playback.

To stop program play
Press ■. The last selection number programmed will be displayed.
To resume playback, press ▷. Play begins from the beginning of the program.
You can play the same program repeatedly as long as you do not cancel program play or erase the program.

To cancel program play
Press CONTINUE and return to the continuous playback mode. The program will be erased.

Skipping to the next selection programmed
Press ▷▷| during playback.

Going back to the beginning of the selection being played
Press |◁◁ during playback.

To cancel all the selections programmed
Press ■ to cancel.

Notes

- The playing time for selection numbers higher than 20 will not be added into the total playing time.
- When selections have been programmed for sides A and B, the total playing time displayed in stop mode will show the selections programmed for side B and the total playing time for side B.

Locating the Loudest Portion of the Disc – Peak Search

The unit will scan a disc from beginning to end and determined the loudest portion (peak level) of the disc, and then play that portion repeatedly. In the continuous play mode, only the disc in the play mode can be searched. In the program play mode, all of the disc to be programmed can be searched. This function will make it easier for you to adjust to the optimum level when recording on tape. You can use this function in the continuous, shuffle and program play modes.

To set peak search
Press PEAK SEARCH in the stop mode. "PEAK" flashes on the display. The entire tracks in a disc or program will be searched automatically. "PEAK" lights up and the loudest portion will be played repeatedly for 4 seconds. Adjust the recording level on your tape deck according to the peak level.

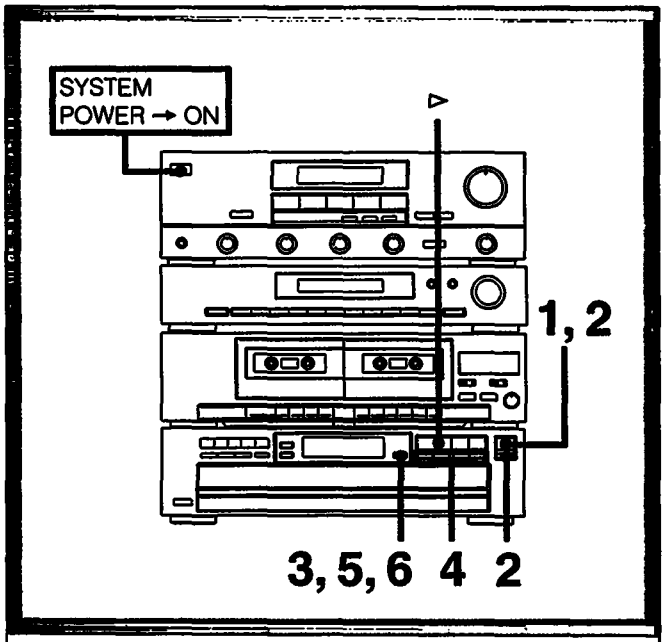
To stop peak search
Press ■.
Press ▮▮ to pause at the first selection.

To start play immediately
Press ▷.

Note on peak search
The unit determines the loudest portion (peak level) of a disc by searching it at fixed intervals. As a result, the portion searched may differ from the actual peak level. In addition, this function may determine different portions as the peak level for the same disc. However, the difference between the portion searched and the actual peak level is insignificant and will not present any problem in adjusting the recording level.

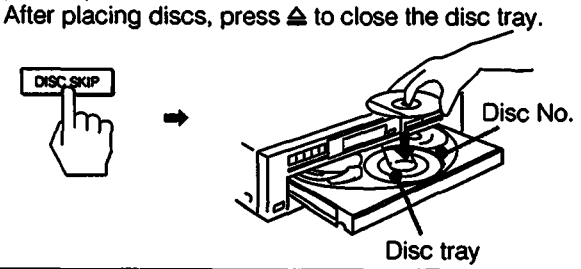
Designating the Total Playing Time – Time Edit

You can designate a time and the unit will make 2 different programs of selections each fitting within that period. Use this function by designating the length of your tape for editing both sides of a tape.



1 Press ⏏ to open the disc tray.

2 Place a disc with the label side up. To play more than one disc, press DISC SKIP to turn the disc tray and place up to 5 discs.
After placing discs, press ⏏ to close the disc tray.

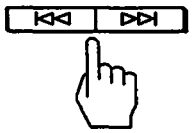


3 Press EDIT/TIME FADE.

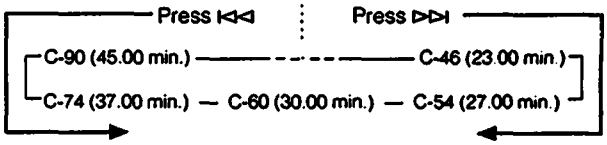
"EDIT" lights up and "A" blinks.

4 Designate the length of one side of your tape.

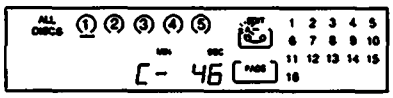
- To set the minute



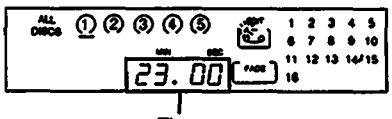
Each time ⏮/⏭ is pressed, the time changes as followings:



- To set the seconds, press ◀◀/▶▶.
  The time increases or decreases by 10 seconds.



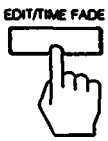
⬇ After 1 second



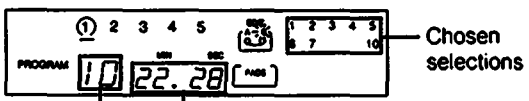
Time

Note
Total playing time can be set up to 59 minutes 50 seconds.

5 Press EDIT/TIME FADE.



The program for side A is completed.
If "LINK" blinks during side B program, see "To add selection(s)" on the next page.

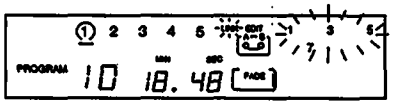


6 Press EDIT/TIME FADE once more, to make a program for the other side of your tape. If "LINK" blinks, see "To add selection(s)".

– Repeat Play

T98

To add selection(s) –LINK–
After all selections on the disc have been programmed, if there is the selection that fit in the remaining time, "LINK" and the selection numbers will blink.



To add selection, press EDIT/TIME FADE again. A program will be made automatically to fit the playing time as close as possible to the remaining time.
If the remaining time can contain other selection(s), "LINK" and the selection number keep blinking. When "LINK" blinks, if the disc is changed by another disc, the new selection number(s) on the new disc that fit in the remaining time will blink.
"EDIT" disappears when the playing time becomes equal to the designated time. Whether "LINK" is blinking or not, you can change the disc by another disc and choose selection(s) to fit the remaining time.

To play the program
Press ▷.
The selections for side A will be played and then the unit will pause. "B" lights up in the tape side indicator. Set the tape to the beginning of side B, then press ▷ or ▮▮.
The selections for side B will be played.

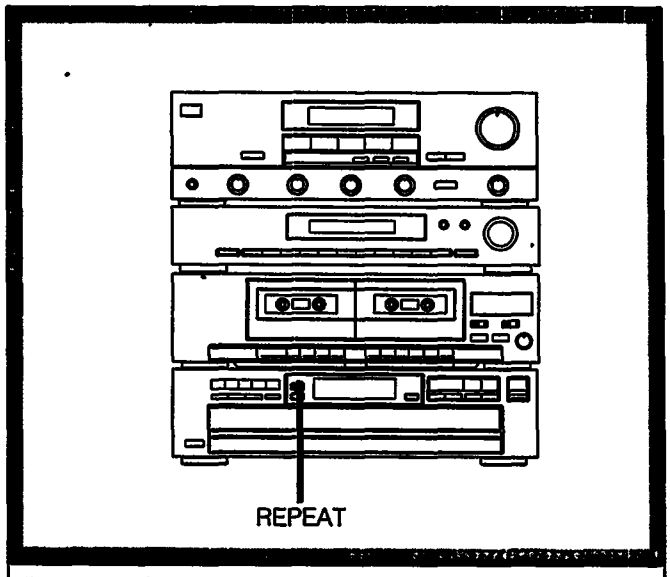
Note
Playback can be performed when "EDIT" is displayed.

To stop playback
Press ■.
You can play the same program repeatedly as long as you do not cancel time edit or erase the program.

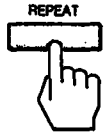
To cancel time edit
Press CONTINUE and return to the continuous playing mode.
The program will be erased.

To erase the entire program
Press ■ once during stop; twice during playback.
The program is also erased, when you turn off the unit.

To include desired selections in the program
1 Make your own program of the desired selections.
See page 18 for instructions.
2 Follow the procedure as shown on the preceding page. Just designate the length of your tape, and you need not to subtract the playing time of your program. The unit will place your selections at the beginning of its program and add other selections to fit the remaining time.



Press REPEAT before or during playback.



In the 1 DISC mode, press REPEAT so that "REPEAT" appears on the display. The unit repeats all selections of a disc. Press REPEAT so that "REPEAT 1" appears. The unit repeats one selection.
In the ALL DISCS mode, press REPEAT so that "REPEAT" appears on the display. The unit repeats all selections of all discs. Press REPEAT so that "REPEAT 1" appears. The unit repeats one selection.

To cancel repeat play
Press REPEAT until "REPEAT" disappears.

Tips on Editing Tapes

The following functions are convenient for editing your own tapes.

Fading out after a Desired Duration – Time Fade

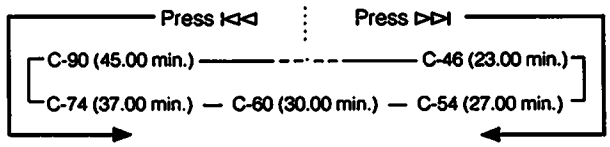
You can have the play fade out at the end by designating the play duration. Once time fade is set, it functions twice for editing both sides of a tape. You can change discs without canceling this function. The fade time is preset to 5 seconds.

To set time fade

1 Press EDIT/TIME FADE twice during stop.
[TIME FADE] is displayed on the display.

2 Set the desired play duration by pressing ⏮/⏭ and ◀◀/▶▶.

- To set the minute
  Each time ⏮/⏭ is pressed, the display changes in the following order:



- To set the second
  Each time ◀◀/▶▶ is pressed, the seconds will be set in 10 second shifts.

- The desired play duration can be set up to 59 minutes 50 seconds.

3 To start playback, press ▷.
After the designated time, playback fades out and the unit enter the pause mode. Tape side B lights up. Press ▷ or ⏸ to resume playback for the other side of the tape.
When the playback fades out for the second time, the unit enters the pause mode and the time fade function is canceled.

When playback ends in the duration of time fade
Time fade function will be kept on . Change the disc and start playback automatically. When the total playing time is within some seconds before the designated time, the player fades out.

To cancel time fade
Time fade will be canceled when:
– EDIT/TIME FADE is pressed once again.
– ◀◀/▶▶ (manual search) is pressed during playback.

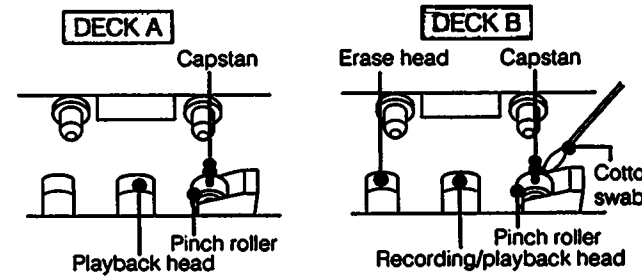
To display the time remaining until the time set
Press TIME twice.

If PEAK SEARCH is pressed after setting time fade
Time fade is released but peak search is kept active.

Maintenance

Cleaning the heads and tape path
Clean after every 10 hours of operation and before recording for optimum record/playback quality.

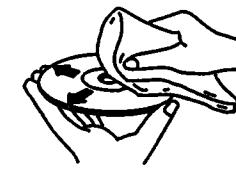
1 Press ■ ⏏.
2 Slightly moisten the tip of a cotton swab with cleaning fluid or alcohol.
3 Wipe heads, pinch rollers and capstans.



Do not insert a cassette until cleaned areas are completely dry.

Demagnetizing the heads
After 20 to 30 hours of use, it is necessary to remove, residual magnetism built up on the head. Turn off the power and demagnetize heads with any commercially available demagnetizer.

Cleaning discs
Before playing, clean the disc with the cleaning cloth. Wipe the disc from the center out.



Do not use solvents such as benzine, thinner, commercially available cleaners or anti-static spray intended for analog discs.

Notes on handling discs

- To keep the disc clean, handle the disc by its edge. Do not touch the surface.
- Do not stick paper or tape on the disc.

- Do not expose the disc to direct sunlight or heat sources such as hot air ducts, or leave it in a car parked in direct sunlight as temperature may rise considerably.
- After playing, store the disc in its case.

Specifications

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 8-ohm loads, both channels driven, from 40 - 20,000 Hz; rated 110 watts per channel minimum RMS power, with less than 0.9% total harmonic distortion from 250 milliwatts to rated output.

TA-AV421

Frequency response
PHONO: RIAA curve
CD, VIDEO: 10 Hz – 50 kHz ±3 dB

Input

	Sensitivity	Impedance
PHONO	2.5 mV	50 kilohms
CD, VIDEO	250 mV	50 kilohms

Output: SPEAKER: Accepts speakers of 8 to 16 ohms
HEADPHONES: Accepts headphones with low and high impedance
Rear: 10 W + 10 W (at front off, 8 ohms)
BASS: ±10 dB
TREBLE: ±8 dB

Dimensions: Approx. 430 x 145 x 360 mm (w/h/d) (17 x 5 3/4 x 14 1/4 inches)

Weight: Approx. 9.5 kg (20 lb 15 oz) net

ST-JX421

System: FM stereo, FM/AM superheterodyne
Tuner: Quartz-locked digital synthesizer system

FM tuner section

Tuning range: 87.5 – 108 MHz
Antenna terminals: 75 ohms unbalanced
300 ohms balanced
Intermediate frequency: 10.7 MHz
Sensitivity (at 50 dB quieting)
22.1 dBf, 7 µV (mono),
42.1 dBf, 70 µV (stereo)
Usable sensitivity: 19.5 dBf, 5 µV (IHF)
Signal to noise ratio (at 75 kHz deviation)
80 dB (mono),
75 dB (stereo) at 1 kHz
Separation: 35 dB at 1 kHz
Selectivity: 55 dB at 400 kHz
Harmonic distortion: 0.3% (mono),
0.5% (stereo) at 1 kHz

AM tuner section

Tuning range: 530 – 1,710 kHz
Antenna: AM loop antenna, External antenna terminal
Intermediate frequency: 450 kHz
Usable sensitivity: AM loop antenna: 500 µV/m (1,000 kHz)
Signal-to-noise ratio: 54 dB
Harmonic distortion: 0.5%
Selectivity: 38 dB (10 kHz)
Dimensions: Approx. 430 x 80 x 295 mm (w/h/d) (17 x 3 1/4 x 11 5/8 inches)
Weight: Approx. 2.1 kg (4 lb 11 oz) net

TC-W421

Recording system: 4-track 2-channel stereo
Frequency response (DOLBY NR OFF)
With TYPE II cassette (Sony UCX-S): 30 – 14,000 Hz (±3 dB)
With TYPE I cassette (Sony HF-S): 30 – 13,000 Hz (±3 dB)
Wow and flutter: 0.12% WRMS (NAB)
Dimensions: Approx. 430 x 120 x 280 mm (w/h/d) (17 x 4 3/4 x 11 1/8 inches)
Weight: Approx. 3.5 kg (7 lb 12 oz) net

CDP-C221

System: Compact disc digital audio system
Laser: Semiconductor laser (λ = 780 nm)
Emission duration: continuous
Laser output: Max. 44.6 µW*
* This output is the value measured at a distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.
Frequency response: 2 Hz – 20 kHz (±0.5 dB)
Harmonic distortion: Less than 0.01 % (1 kHz)
Signal to noise ratio: More than 100 dB
Dynamic range: More than 98 dB
Dimensions: Approx. 430 x 125 x 385 mm (w/h/d) (17 x 5 x 15 1/4 inches)
Weight: Approx. 5.1 kg (11 lb 4 oz) net

General

Power requirements: 120 V AC, 60 Hz
Power consumption: 220 W (Model for USA)
430 VA (Model for Canada)
Accessories supplied:
AM loop antenna (1)
FM wire antenna (1)
Remote Commander RM-U421 (1)
Sony batteries SUM-3(NS) (2)
Audio signal connecting cord (phono plug x 2 ⇔ phono plug x 2) (1)
SYSTEM CONTROL 1 cord (1)
SYSTEM CONTROL 2 cord (1)
SYSTEM CONTROL 3 cord (1)
(For USA model, the SYSTEM CONTROL 1 and 3 is equipped on the TC-W421.)
Model only for Canada:
Headphone MDR-006 (1)
Plug adaptor (1)

Design and specifications are subject to change without notice.

Troubleshooting

Before going through the check list below, first refer back to the connection and operating procedures.
Should any problem persist after you have made these checks, consult your nearest Sony dealer.

Tuner Operation	
STEREO indicator blinks.	• A very weak FM station or a noisy FM program is received. → Adjust the antenna or connect an external FM antenna.
Severe hum or noise.	• The signal strength is too weak. → Adjust the antenna, connect an external antenna or connect the ground wire.
Cassette Deck Operation	
● button does not activate.	• No tape in the cassette compartment. • The tab has been removed from the tape. (See page 13.) → Cover each slot of the tape with plastic tape.
Function buttons do not activate.	• Cassette compartment is not fully closed.
Recording or playback cannot be made or there is decrease in sound level.	• The recording/playback and erase heads are either dirty or magnetized → Clean or demagnetize the heads. (See page 22.)
Excessive wow, flutter or dropout.	• Capstan or pinch roller is dirty. (See page 22.)
Incomplete erasure.	• Erase head is dirty. (See page 22.)
Unbalanced tone in high frequencies.	• Improper setting of the DOLBY NR switch. → When playing back, set the switch to the same position used in recording. • Improper setting of the TAPE SELECTOR switch. (See page 12.) → Set correctly.
Compact Disc Operation	
The power of the CD player is not turned on.	• The function selector is set to the TUNER mode. → Set to the other mode.
The programmed selection are canceled.	• The programmed selections are automatically canceled when the unit enters the TUNER mode. → Program the selections again.
No audio from one or both channels Play does not begin.	• Incorrect operation of the amplifier. • Loose connection. → Connect the cords firmly.
Remote commander does not operate the unit.	• No disc in the disc compartment. • The unit is in the pause mode. → Press ▷ or II to release pause. • Moisture condensation. → Leave the unit turned on for about an hour. • The disc is set upside down. → Set the disc with the label side up. • The disc is tilted. → Set the disc correctly. • The disc is extremely dirty.
Any operation is not possible.	• The internal control program may not run. → Turn off the power and turn it on again.
General	
The unit is not turn on.	• Check if any button on the front panel has been pressed before turning on the SYSTEM POWER switch.
No audio.	• Check the power cord connection. • Check the connections. (See pages 5 to 6.)
No audio of the CD player.	• The function selector is set to the TUNER mode. → Set to the other mode.
No audio from one channel.	• Adjust the BALANCE control. • Check the speaker cord or connecting cord connection. (See page 5 to 6.)
Noise when TV is turned on.	• Move the TV away from the audio system.
Lack of bass sound or obscure instrument position.	• Check the connection between the amplifier and speakers.

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